

0054660

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1172



DATE RECEIVED: 12/01/00

RFW LOT # :0012L422

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
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B111F1

% MOISTURE	001	SO	00L*S192	11/29/00	12/04/00	12/05/00
% MOISTURE	001 REP	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	001	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	001 REP	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111F2

% MOISTURE	002	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	002	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111F3

% MOISTURE	003	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	003	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111F4

% MOISTURE	004	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	004	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111D7

% MOISTURE	005	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	005	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111D8

% MOISTURE	006	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	006	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111D9

% MOISTURE	007	SO	00L*S192	11/29/00	12/04/00	12/05/00
% SOLIDS	007	SO	00L*S192	11/29/00	12/04/00	12/05/00

B111F0

% MOISTURE	008	SO	00L*S192	11/29/00	12/04/00	12/05/00
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RECEIVED
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EDMC

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1172

DATE RECEIVED: 12/01/00

RFW LOT # :0012L422

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
% SOLIDS	008	SO	00L*S192	11/29/00	12/04/00	12/05/00

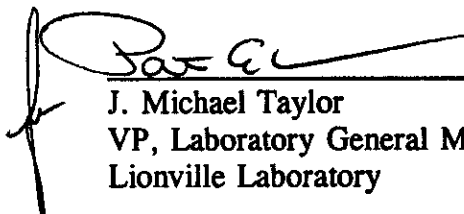
**Recra LabNet Philadelphia
Analytical Report**

Client : TNU-HANFORD B99-093 H1172
RFW# : 0012L422

W.O. # : 10985-001-001-9999-00
Date Received: 12-01-00

INORGANIC CASE NARRATIVE

1. This narrative covers the analyses of 8 solid samples.
2. The samples were prepared and analyzed in accordance with the method checked on the attached glossary.
3. Sample holding times as required by the method and/or contract were met.
4. The cooler temperature was recorded on the chain-of-custody.
5. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.
6. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.



J. Michael Taylor
VP, Laboratory General Manager
Lionville Laboratory

01-15-01
Date

njp\112-422

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

WET CHEMISTRY
METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
% Ash	___ D2216-80		
% Moisture	✓ ___ D2216-80		___ ILMO4.0 (e)
% Solids	✓ ___ D2216-80		___ ILMO4.0 (e)
% Volatile Solids	___ D2216-80		
ASTM Extraction in Water	___ D3987-81/85		
BTU	___ D240-87		
CEC		___ 9081	___ c
Chromium VI		___ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		___ 1110(mod) ___ 9045C	
Cyanide, Total		___ 9010B	___ ILMO4.0 (e)
Cyanide, Reactive		___ Section 7.3/9014	
Halides, Extractable Organic		___ 9020B	___ EPA 600/4/84-008
Halides, Total		___ 9020B	___ EPA 600/4/84-008
EP Toxicity		___ 1310A	
Flash Point		___ 1010	
Ignitability		___ 1010	
Oil & Grease		___ 9071A	
Carbon, Total Organic		___ 9060	___ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	___ D240-87(mod)	___ 5050	
Petroleum Hydrocarbons, Total Recoverable		___ 9071	___ EPA 418.1
pH, Soil		___ 9045C	
Sulfide, Reactive		___ Section 7.3/9030B	
Sulfide		___ 9030B(mod)	
Specific Gravity	___ D1429-76C/	___ D5057-90	
Sulfur, Total		___ 9056	
Synthetic Preparation Leach		___ 1312	
Paint Filter		___ 9095A	

Other:

Method:

Other:

Method

Recra LabNet Philadelphia
METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

REP = Sample Replicate

LC = Laboratory Control Sample.

NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.
2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).
3. Test Methods for Evaluating Solid Waste (USEPA SW-846).
 - a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).
 - b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).
 - c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).
 - d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).
 - e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.
 - f. Code of Federal Regulations.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 01/15/01

CLIENT: TNUHANFORD B99-093 H1172
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 0012L422

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
*****	*****	*****	*****	*****	*****	*****
-001	B111F1	% Moisture	51.7		0.0	1.0
		% Solids	48.3	%	0.01	1.0
-002	B111F2	% Moisture	44.4		0.0	1.0
		% Solids	55.6	%	0.01	1.0
-003	B111F3	% Moisture	7.8		0.0	1.0
		% Solids	92.2	%	0.01	1.0
-004	B111F4	% Moisture	43.0		0.0	1.0
		% Solids	57.0	%	0.01	1.0
-005	B111D7	% Moisture	11.4		0.0	1.0
		% Solids	88.6	%	0.01	1.0
-006	B111D8	% Moisture	44.8		0.0	1.0
		% Solids	55.2	%	0.01	1.0
-007	B111D9	% Moisture	44.3		0.0	1.0
		% Solids	55.7	%	0.01	1.0
-008	B111F0	% Moisture	5.2		0.0	1.0
		% Solids	94.8	%	0.01	1.0

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 01/15/01

CLIENT: TNUHANFORD B99-093 H1172
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 0012L422

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-----	-----	-----	-----	-----	-----	-----
-001REP	B111F1	% Moisture	51.7	55.4	6.9	1.0
		% Solids	48.3	44.6	7.9	1.0

Custody Transfer Record/Lab Work Request Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS[illegible][illegible]

Special Instructions: Saf 899-093

Run matrix QC

WGA = Carbon tetrachloride

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:

1) Shipped ☒ or
Hand Delivered ☐

Airbill # See below

2) Ambient or Chilled

3) Received in Good

Condition Y or N

4) Labels Indicate Property Preserved

Property Preserved (Y) or N

5) Received Within

Holding Times

☐ Y or ☐ N

COC Total was:

1) Present on Outer
Packaging (Y) or N

2) Unbroken on Outer

Package C or N
3) Present in Sample

3) Present on Sample
(Y) or N

4) Unbroken on

Sample Y or N

COC Record Present:

Upon Sample Rec'd :
Y or N

Cooler 1.5

Temp. 4.5 °C

Relinquished by	Received by	Date	Time
FELEx	TRoppel	12-1-00	0945

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Discrepancies Between
Samples Labels and
COC Record? Y or ()

42.35 79.54 08.75

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-20		Page 1 of 1	
Collector TMJOHANSEN		Company Contact VIROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ		Price Code 9N	
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Air Quality <input type="checkbox"/>		Data Turnaround 45 Days	
Ice Chest No. 2RC99-0008 (1 of 1)		Field Logbook No. EL-1516		COA R207P2DP60		Method of Shipment FED EX			
Shipped To TMA/RECRA		Offsite Property No. A010039				Bill of Lading/Air Bill No. 42357953 0875			
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		Cool 4C					
		Type of Container		aG					
		No. of Container(s)		1					
		Volume		250mL					
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				VOA - 8260A (TC1) [Carbon tetrachloride]; Moisture Content - D2216					
SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time	Analysis					
B111F1	OTHER SOLID	11-29-00	1115	X					
B111F2	OTHER SOLID	11-29-00	1130	X					
B111F3	OTHER SOLID	11-29-00	1150	X					
B111F4	OTHER SOLID	11-29-00	1200	X					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By: <i>[Signature]</i> Date/Time: 11-29-00 1400		Received By: <i>[Signature]</i> Date/Time: 11-29-00 1400			** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found. ** Laboratory must include the % Moisture data as part of all hard copy reports. Samples stored in Ref. # 2B at the 3728 Shipping Facility on 11/29/00 Collector not available to relinquish samples on 1/30/00 for shipment. <i>RT 11/30/00</i>				
Relinquished By: <i>[Signature]</i> Date/Time: 11-29-00 0800		Received By: <i>[Signature]</i> Date/Time: 11-29-00 0800							
Relinquished By: <i>[Signature]</i> Date/Time: 11-30-00 0800		Received By: <i>[Signature]</i> Date/Time: 11-30-00 0800							
Relinquished By: <i>[Signature]</i> Date/Time: 12-10-00 0945		Received By: <i>[Signature]</i> Date/Time: 12-10-00 0945							
Relinquished By: <i>[Signature]</i> Date/Time: 11-30-00 0800		Received By: <i>[Signature]</i> Date/Time: 11-30-00 0800							
LABORATORY SECTION					Matrix *				
Received By: _____		Title: _____			S-Soil SE-Sediment SO-Solid S-Sludge W-Water O-Oil A-Air DS-Dry Solids DL-Dry Liquids T-Tissue WL-Wipe L-Liquid V-Vegetation X-Other				
FINAL SAMPLE DISPOSITION		Disposal Method: _____			Disposed By: _____ Date/Time: _____				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-19		Page 1 of 1																																									
Collector TMJOHANSEN		Company Contact VJROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ		Price Code 9N Data Turnaround 45 Days																																									
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Air Quality []																																											
Ice Chest No. ERC 99-068 (1 of 1)		Field Logbook No. EL-1516		COA R20ZP2DP60		Method of Shipment FED EX																																											
Shipped To TMA RECRA		Offsite Property No. A010039		Bill of Lading/Air Bill No. 42357953 - 0875																																													
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		Cool 4C																																													
		Type of Container		2G																																													
		No. of Container(s)		1																																													
		Volume		250mL																																													
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				VOA - 8260A (TCL) (Carbon tetrachloride). Moisture Content - D2216																																													
SAMPLE ANALYSIS																																																	
Sample No.	Matrix *	Sample Date	Sample Time																																														
B111D7	OTHER SOLID	11-29-00	1520	X																																													
B111D8	OTHER SOLID	11-29-00	1035	X																																													
B111D9	OTHER SOLID	11-29-00	1050	X																																													
B111F0	OTHER SOLID	11-29-00	1107	X																																													
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> CHAIN OF POSSESSION <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>TM JOHANSEN</i></td> <td>11/29/00</td> <td><i>Ref #2B Stored in</i></td> <td>11/29/00</td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>Ref #2B 3728</i></td> <td>11/30/00</td> <td><i>R. Thore</i></td> <td>11/30/00</td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>R. Thore</i></td> <td>11/30/00</td> <td><i>FED EX</i></td> <td></td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td><i>FED EX</i></td> <td>12-1-00 0945</td> <td><i>Thore</i></td> <td>12-1-00 0945</td> </tr> <tr> <td>Relinquished By</td> <td>Date/Time</td> <td>Received By</td> <td>Date/Time</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> </div> <div style="width: 48%;"> SPECIAL INSTRUCTIONS ** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found. ** Laboratory must include the % Moisture data as part of all hard copy reports. Samples stored in Ref. #2B at the 3728 Shipping Facility on 11/29/00 Collector not available to relinquish samples on 11/30/00 for shipment. <div style="text-align: right;"><i>RT</i> 11/30/00</div> </div> </div>										Relinquished By	Date/Time	Received By	Date/Time	<i>TM JOHANSEN</i>	11/29/00	<i>Ref #2B Stored in</i>	11/29/00	Relinquished By	Date/Time	Received By	Date/Time	<i>Ref #2B 3728</i>	11/30/00	<i>R. Thore</i>	11/30/00	Relinquished By	Date/Time	Received By	Date/Time	<i>R. Thore</i>	11/30/00	<i>FED EX</i>		Relinquished By	Date/Time	Received By	Date/Time	<i>FED EX</i>	12-1-00 0945	<i>Thore</i>	12-1-00 0945	Relinquished By	Date/Time	Received By	Date/Time				
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Relinquished By	Date/Time	Received By	Date/Time																																														
LABORATORY SECTION		Received By		Title		Date/Time																																											
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time																																											

Recra LabNet - Lionville Laboratory
VOA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1172

DATE RECEIVED: 12/01/00

RFW LOT # :0012L422

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B111F1	001	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111F1	001 MS	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111F1	001 MSD	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111F2	002	M1	SO 00LVN410	11/29/00	N/A	12/11/00
B111F3	003	M1	SO 00LVN410	11/29/00	N/A	12/11/00
B111F4	004	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111D7	005	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111D8	006	M1	SO 00LVN409	11/29/00	N/A	12/09/00
B111D9	007	M1	SO 00LVN410	11/29/00	N/A	12/11/00
B111F0	008	M1	SO 00LVN410	11/29/00	N/A	12/11/00

LAB QC:

VBLKIZ	MB1	S	00LVN409	N/A	N/A	12/09/00
VBLKIZ	MB1 BS	S	00LVN409	N/A	N/A	12/09/00
VBLKIQ	MB1	S	00LVN410	N/A	N/A	12/11/00





Chemical and Environmental Measurement Information

Recra LabNet Philadelphia

Analytical Report

Client: TNU-HANFORD B99-023

RFW #: 0012L422

SDG/SAF #: H1172/B99-023

W.O. #: 10985-001-001-9999-00

Date Received: 12-01-2000

GC/MS VOLATILE

Eight (8) solid samples were collected on 11-29-2000.

The samples and their associated QC samples were analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8260A for client specified Volatile target compound Carbon Tetrachloride on 12-09,11-2000.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. All samples were analyzed within required holding time.
3. All samples required a medium level analysis and an additional dilution due to high levels of target compound Carbon Tetrachloride. The summary report does not reflect the correct dilution factors due to programming limitations.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.

All blank spike recoveries were within EPA QC limits.

The target compounds are not included in the spiking solution. (CLP spike recoveries have been reported on the Form 3.)

6. Internal standard area and retention time criteria were met.

J. Michael Taylor
V.P./Laboratory General Manager
Lionville Laboratory

01-18-01
Date

son\group\data\voa\tnu-hanford-0012-422.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

GLOSSARY OF VOA DATA

DATA QUALIFIERS

- U** = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
- J** = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B** = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
- E** = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- D** = Identifies all compounds identified in an analysis at a secondary dilution factor.
- I** = Interference.
- NQ** = Result qualitatively confirmed but not able to quantify.
- N** = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
- X** = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
- Y** = Additional qualifiers used as required are explained in the case narrative.



GLOSSARY OF VOA DATA

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.



TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quan modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quan modifications:

- MP** - Missed Peak: manually added peak not found by automatic quan program.
- PA** - Peak Assignment: quan report was changed to reflect correct peak assignment.
- RI** - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.
- SP** - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.
- CB** - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.
- PI** - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Recra LabNet - Lionville Laboratory

Volatiles By GC/MS, Special List

Report Date: 01/10/01 23:19

RFW Batch Number: 0012L422

Client: TNUHANFORD B99-093 H1172 Work Order: 10985001001 Page: 1a

	Cust ID:	B111F1	B111F1	B111F1	B111F2	B111F3	B111F4
Sample	RFW#:	001	001 MS	001 MSD	002	003	004
Information	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	195	195	195	10.5	20.5	205
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Level:	MED	MED	MED	MED	MED	MED
1,2-Dichloroethane-d4		105 %	110 %	111 %	104 %	106 %	108 %
Surrogate Toluene-d8		100 %	97 %	101 %	102 %	101 %	102 %
Recovery Bromofluorobenzene		93 %	92 %	92 %	92 %	87 %	91 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Carbon Tetrachloride		1700000	116 %	115 %	92000	180000	2400000

	Cust ID:	B111D7	B111D8	B111D9	B111F0	VBLKIZ	VBLKIZ BS
Sample	RFW#:	005	006	007	008	00LVN409-MB1	00LVN409-MB1
Information	Matrix:	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL
	D.F.:	205	205	100	10.5	2.00	2.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Level:	MED	MED	MED	MED	MED	MED
1,2-Dichloroethane-d4		113 %	111 %	104 %	111 %	106 %	110 %
Surrogate Toluene-d8		104 %	103 %	102 %	106 %	96 %	104 %
Recovery Bromofluorobenzene		95 %	92 %	94 %	85 %	83 %	97 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Carbon Tetrachloride		1400000	2000000	840000	78000	620 U	131 %

*= Outside of EPA CLP QC limits.

Recra LabNet - Lionville Laboratory

Volatiles By GC/MS, Special List

Report Date: 01/10/01 23:19

RFW Batch Number: 0012L422

Client: TNUHANFORD B99-093 H1172 Work Order: 10985001001 Page: 2a

Cust ID: VBLKIQ

Sample
Information

RFW#: 00LVN410-MB1
Matrix: SOIL
D.F.: 2.00
Units: UG/KG
Level: MED

1,2-Dichloroethane-d4	105	%
Surrogate Toluene-d8	103	%
Recovery Bromofluorobenzene	92	%
-----fl-----fl-----fl-----fl-----fl-----fl-----fl		
Carbon Tetrachloride	620	U

*= Outside of EPA CLP QC limits.

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS[illegible][illegible]

Run matrix QC

UOA = Carbon tetrachloride

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were:
1) Shipped ☒ or
Hand Delivered ☐

AirMail # See below

2) Ambient or Chilled

3) Received In Good Condition ☒ Y or ☐ N

4) Labels Indicate Property Preserved

(Y) or N

5) Received Within Holding Times

☒ Y or N

COC Tape was:

1) Present on Outer Package (Y) or N

2) Unbroken on Outer
Package ☒ Y or ☐ N

3) Present on Sample
(Y) or N

4) Unbroken on
Sample (Y) or N

COC Record Pres
Upon Sample Rec't

Cooler Temp. 4.5 °C

Relinquished by	Received by	Date	Time
FelEx	TRoppel	12-1-00	0945

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL REWRITTEN		

Discrepancies Between
Samples Labels and
COC Record? Y or (N)
NOTES:

4235 7954 0875

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-20		Page 1 of 1	
Collector TMOHANSEN		Company Contact VJROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ		Price Code 9N Data Turnaround 45 Days	
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Air Quality <input type="checkbox"/>			
Ice Chest No. 2RC99-008 (1 of 1)		Field Logbook No. EL-1516		COA R20ZP21D60		Method of Shipment FED EX			
Shipped To TMA/RECRA		Offsite Property No. A010039		Bill of Lading/Air Bill No. 42357953 0875					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		Cool 4C					
		Type of Container		2G					
		No. of Container(s)		1					
		Volume		250mL					
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				VOA - 8160A (TCL) (Carbon tetrachloride). Moisture Content - D2216					
SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time						
B111F1	OTHER SOLID	11-29-00	1115	X					
B111F2	OTHER SOLID	11-29-00	1130	X					
B111F3	OTHER SOLID	11-29-00	1150	X					
B111F4	OTHER SOLID	11-29-00	1200	X					
CHAIN OF POSSESSION									
Relinquished By		Date/Time		Received By		Date/Time		SPECIAL INSTRUCTIONS	
7-5 11/30/00 <i>[Signature]</i>		11-29-00 1400		11-29-00 1400		11-29-00 1400		SPECIAL INSTRUCTIONS ** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found. ** Laboratory must include the % Moisture data as part of all hard copy reports. Samples stored in Ref. #2B at the 3728 Shipping Facility on 11/21/00 Collector not available to relinquish samples on 1/30/00 for shipment. <i>RT 11/30/00</i>	
Relinquished By		Date/Time		Received By		Date/Time			
11/28/00 0800 <i>[Signature]</i>		11/28/00 0800		11/28/00 0800		11/28/00 0800			
Relinquished By		Date/Time		Received By		Date/Time			
11/30/00 0800 <i>[Signature]</i>		11/30/00 0800		11/30/00 0800		11/30/00 0800			
Relinquished By		Date/Time		Received By		Date/Time			
12-10-00 0945 <i>[Signature]</i>		12-10-00 0945		12-10-00 0945		12-10-00 0945			
Relinquished By		Date/Time		Received By		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-19		Page 1 of 1	
Collector TMJOHANSEN		Company Contact VJROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ		Price Code 9N Data Turnaround 45 Days	
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Air Quality <input type="checkbox"/>			
Ice Chest No. ERC 99 608 (1 of 1)		Field Logbook No. EL-1516		COA R20ZP2DP60		Method of Shipment FED EX			
Shipped To TMA/RECRA		Offsite Property No. A 10039		Bill of Lading/Air Bill No. 42357953 - 0875					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		Cool 4C					
		Type of Container		aG					
		No. of Container(s)		1					
		Volume		250mL					
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				VOA - \$260A (TCL) (Carbon tetrachloride). Moisture Content - D2216					
SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time						
B111D7	OTHER SOLID	11-29-00	1520	X					
B111D8	OTHER SOLID	11-29-00	1035	X					
B111D9	OTHER SOLID	11-29-00	1050	X					
B111F0	OTHER SOLID	11-29-00	1107	X					
CHAIN OF POSSESSION									
Relinquished By		Sign/Print Name		Date/Time		SPECIAL INSTRUCTIONS			
R. Thore		R. Thore		11/30/00		** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found.			
Relinquished By		R. Thore		11/30/00		** Laboratory must include the % Moisture data as part of all hard copy reports.			
Relinquished By		R. Thore		11/30/00		<p>Samples stored in Ref. # 2B at the 3728 Shipping Facility on 11/29/00</p> <p>Collector not available to relinquish samples on 11/30/00 for shipment.</p> <p>RT 11/30/00</p>			
Relinquished By		FED EX		12-1-00 0945					
Relinquished By		Received By		Date/Time					
Relinquished By		Received By		Date/Time					
Relinquished By		Received By		Date/Time		Matrix *			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			